Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1-2 (canceled)

3. (herein amended) ~~The~~ A method ~~according to claim 1,~~ for controlling a transmission control protocol window size in an asynchronous transfer mode network by using an explicit rate value in a resource management cell of a network during data transmission from a transmitting side ATM terminal to a receiving side ATM terminal, wherein the window size is computed by the Expression wherein,

window size = MIN [credit, cwnd],

('credit' is an amount of data which the transmission control protocol receiving side can receive, 'cwnd' is a congestion window, cwnd = transmission control protocol throughput * estimated_RTT * safety_factor),

'estimated_RTT' is an estimated round trip time of the packet,

'safety_factor(s)' is a numerical value compensating for variations in network states and RTT,

$$\text{TCP throughput} = \text{last\_ER} * \frac{48}{53} * \frac{31}{32} * \frac{TCP\_MSS}{TCP\_MSS + 56bytes}$$

'last_ER' is an ER value in the currently-received RM cell, and

'TCP_MSS' is a maximum segment size of the transmission control protocol level.

4. (herein amended) A method for controlling a transmission control protocol window size in an asynchronous transfer mode network, comprising:

a step for an ATM transmitting terminal to receive a resource management cell;

a step for transmitting an explicit rate value in the received resource management cell to a transmission control protocol level in the ATM transmitting terminal;

a step for setting a congestion window size to ~~be '1',~~ an initial value, when the explicit rate value is received;

a step for computing the congestion window size, when an acknowledgment signal is received from an ATM receiving terminal; and

a step for computing a window size, when the congestion window ~~value~~ size is computed, and for transmitting a data to the ATM receiving terminal according to the computed window size.

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5. (herein amended) The method according to claim 4, wherein the congestion window size is computed by the Expression wherein,

congestion window size = transmission control protocol throughput * estimated_RTT * safety_factor

('estimated_RTT' is an estimated round trip time of the packet, and 'safety_factor(s)' is a numerical value compensating for variations in network states and RTT).

6. (original) The method according to claim 5, wherein the transmission control protocol throughput is computed by the Expression wherein,

$$\text{TCP throughput} = \text{last\_ER} * \frac{48}{53} * \frac{31}{32} * \frac{TCP\_MSS}{TCP\_MSS + 56bytes}$$

('last_ER' is an ER value in the currently-received RM cell, and
'TCP_MSS' is a maximum segment size of the transmission control protocol level).

7. (original) The method according to claim 4, wherein the window size is computed by the Expression wherein,

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window size = MIN [credit, cwnd],

('credit' is an amount of data which the transmission control protocol receiving side can receive, and 'cwnd' is a congestion window).

8. (new) The method of according to claim 4, wherein the initial value is '1'.